

What is claimed is:

- 1 1. An electronic device having wireless communication functions under a first
2 operating state and a second operating state, comprising:
3 an antenna pair mounted separately thereon, the first antenna thereof being
4 omni-directional in a predetermined plane when said electronic device is
5 operative under said first operating state, and the second antenna thereof
6 being omni-directional in said predetermined plane when said electronic
7 device is operative under said second operating state;
8 a wireless communication module for encoding and decoding signals that
9 are transmitted and received, respectively, during wireless communication
10 through said antenna pair;
11 a RF switch coupling said wireless communication module to said first
12 antenna and said second antenna for switching between said first antenna
13 and said second antenna; and
14 a trigger switch for detecting the transition between said first operating state
15 and said second operating state that causes rotation in space of said
16 antenna pair, and for triggering said RF switch in responsive thereto;
17 wherein said RF switch switches to said first antenna as said electronic device
18 transitions to said first operating state, and said RF switch switches to said
19 second antenna as said electronic device transitions to said second operating
20 state.
- 1 2. The electronic device according to claim 1, wherein said predetermined plane
2 is the horizontal plane.
- 1 3. The electronic device according to claim 1, wherein said trigger switch is a
2 mechanical switch.
- 1 4. The electronic device according to claim 1, wherein said trigger switch is an
2 optical device.
- 1 5. The electronic device according to claim 1, wherein said trigger switch

2 comprises software codes.

1 6. The electronic device according to claim 1, wherein said wireless
2 communication module follows the standard of IEEE 802.11b protocol.

1 7. The electronic device according to claim 1, wherein said wireless
2 communication module follows the standard of Bluetooth protocol.

1 8. The electronic device according to claim 1, wherein said trigger switch can be
2 manually controlled.

1 9. The electronic device according to claim 1, is a computer having a rotatable
2 unit whereon said antenna pair is mounted, said first operating state and said
3 second operating state being distinguished by the rotation angle of said rotatable
4 unit.

1 10. The electronic device according to claim 1, is a portable computer with a
2 rotatable display panel whereon said antenna pair is mounted.

1 11. The electronic device according to claim 1, is a computer appliance, said first
2 operating state and said second operating state each corresponding to a distinct
3 placement thereof.

1 12. The electronic device according to claim 1, is an access point device having
2 connections to network, said first operating state and said second operating state
3 being the upright and horizontal placement thereof, respectively.

1 13. A wireless information handling system that is operative under at least a first
2 operating state and a second operating state, comprising:

3 an antenna pair mounted thereon, the first antenna thereof being
4 substantially omni-directional in a predetermined plane when said wireless
5 information handling system is operative under said first operating state, and
6 the second antenna thereof being substantially omni-directional in said
7 predetermined plane when said wireless information handling system is

operative under said second operating state, the conversion between said first operating state and second operating state reorienting said antenna pair in space;

a wireless communication module for processing information of said wireless information handling system; and

a switch device coupled to said antenna pair for switching between said first antenna and said second antenna in responsive to the conversion of said wireless information handling system between said first operating state and second operating state;

wherein said switch device switches to said first antenna as said wireless information handling system converts to said first operating state, and said switch device switches to said second antenna as said wireless information handling system converts to said second operating state.

14. The wireless information handling system according to claim 13, is a portable computer with a rotatable display panel whereon said antenna pair is mounted, said first operating state being that when said display panel is open, and said second operating state being that when said display panel is closed.

15. The portable computer according to claim 14, wherein said switch device is mounted inside a hinge of said rotatable display panel, and is triggered by opening and closing said rotatable display panel.

16. The wireless information handling system according to claim 13, wherein the orientation of said wireless information handling system towards a first direction defines said first operating state, and the orientation of said wireless information handling system towards a second direction defines said second operating state.

17. The wireless information handling system according to claim 16, wherein said first direction and said second direction are substantially orthogonal.